



Oregon

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February 21, 2006

Mr. Tom McCue, Environmental Manager
Siltronic Corporation
7200 NW Front Avenue
Portland, OR 97210

**Re: Source Control Evaluation
Siltronic Corporation
Portland, Oregon
ECSI No. 183**

Dear Mr. McCue:

On February 1, 2006 the U.S. Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality (DEQ) met with representatives of Siltronic Corporation (Siltronic) to discuss the "Draft Source Control Alternatives Work Plan, Siltronic Corporation" dated January 3, 2006 (the Draft SCA Work Plan). The Draft SCA Work Plan was prepared on behalf of Siltronic by Maul Foster & Alongi, Inc. (MFA).

Based on the results of uplands and in-river remedial investigation (RI) work and consistent with DEQ Order No. VC-NWR-03-16, Siltronic is proceeding with a source control evaluation of unpermitted discharges and/or releases of TCE and its degradation products to the Willamette River. Uplands and in-river RI work show: 1) releases of trichloroethene (TCE) and its degradation products from a former underground storage tank (UST) system have contaminated groundwater; 2) groundwater is a complete pathway from the area of the release to the Willamette River; and 3) TCE and its degradation products are present in transition zone water (referred to as Area 1) immediately beneath the river at concentrations that exceed relevant screening criteria. Furthermore, during in-river work conducted in the summer of 2005, an area of sediments highly contaminated by TCE was discovered (Area 2). The Area 2 sediments do not appear to be related to the groundwater plume originating from the former UST system.

The Draft SCA Work Plan presents Siltronic's preliminary recommendations for source control, an approach for completing analyses of source control alternatives, and includes a projected schedule for designing and implementing uplands and in-water source control measures. Siltronic's recommendations were supported by a preliminary evaluation of source control technologies that was attached. In response to DEQ's comments on the Supplemental Investigation Report¹, the work plan also provides a review of available information and subsurface data collected near storm water conveyance pipes that run from the vicinity of the former UST system into the river.

OUTCOME OF FEBRUARY 1ST MEETING

The purpose of the February 1st meeting was for the EPA and DEQ to provide Siltronic input on the Draft SCE Work Plan. A significant outcome of the meeting discussions was that Siltronic's projected schedule

¹ Maul Foster & Alongi, Inc., 2005, "Supplemental Investigation Report, Siltronic Corporation Facility, 7200 NW Front Avenue, Portland, Oregon," September 8, a report prepared for Siltronic Corporation.

for implementing in-water source control measures was considered unrealistic given the regulatory and administrative requirements for conducting the work (e.g., negotiation of an agreement with EPA; the number of local, state, and federal stakeholders interested and involved in the review and comment process; and in-river permitting requirements). DEQ also informed Siltronic that the Draft SCA Work Plan would need to be revised and resubmitted for further review.

EPA and DEQ understand from meeting discussions that the projected schedule for implementing source control measures is a significant consideration for Siltronic. Based on this information, Siltronic's commitment to moving forward with source control, and the preliminary results of bench-scale tests presented at the meeting, EPA and DEQ agreed that:

- Evaluation of uplands source control measures should proceed under DEQ oversight in advance of in-water work.
- Further evaluation of enhanced bioremediation as a contaminant treatment technology was warranted based on the following:
 - Bench-scale test results preliminarily suggest that enhanced bioremediation is effective at reducing contaminant concentrations; and
 - Enhanced bioremediation was identified as a component of more than one alternative considered by Siltronic to be suitable for uplands source control near the river (i.e., nutrient injection into the subsurface, nutrient delivery via groundwater circulation wells).
- Siltronic should proceed with developing a work plan for designing and implementing a field pilot study to evaluate the performance and effectiveness of enhanced bioremediation under representative subsurface conditions and contaminant concentrations.

Given that the direction of source control work efforts will shift to the pilot study, there was general agreement that it was unnecessary for DEQ and EPA to review and comment on the Draft SCA Work Plan at this time.

COORDINATION OF SILTRONIC FACILITY SOURCE CONTROL MEASURES

During the February 1st meeting, the status of source control work being conducted by Northwest Natural Gas Company (NWNG) was briefly reviewed. DEQ and NWNG are discussing uplands source control measures for manufactured gas plant (MGP) contamination along the Willamette River. These discussions include the shoreline along the Siltronic site. The source control measure currently being considered by NWNG involves using a series of extraction wells to hydraulically contain and remove MGP contamination.

The portion of the Siltronic site contaminated by TCE and its degradation products occurs within a larger area of MGP impacts. Given the current status of uplands source control work being considered at the Siltronic site, there is the potential for implementation and/or operation of source control measures by Siltronic and NWNG to overlap. Consistent with DEQ Order No. ECVN-NWR-00-27 (the Joint Order), DEQ will expect Siltronic and NWNG to coordinate uplands source control work, and that any source control measures implemented by the two parties will be compatible.

OUTFALL PATHWAY EVALUATION

Although not a topic of discussion at the meeting, DEQ has reviewed Appendix A (NPDES Outfall Pathway Evaluation) of the Draft SCA Work Plan. Appendix A summarizes available information regarding facility operations and the storm water system from the vicinity of the TCE release area (i.e., the UST system) to the

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river. The results of analyzing groundwater samples collected from selected push-probe borings located near the referenced storm water piping alignments are compiled in a table. Figure A-1 indicates that push-probe borings have been drilled within approximately 15 feet of the referenced storm water piping alignments. To date, push-probe drilling has not been conducted with the purpose of collecting samples from the backfill surrounding the pipes.

DEQ considers the currently available data to be inadequate to determine whether the storm water system is an ongoing source of contamination to the river. Additional information is needed to make this determination including, but not limited to, as-built drawings of the storm water system and concrete cut-off dike; conveyance system cleanout history and cleanout material analytical data; and samples collected for analysis from within 1) storm water piping, and 2) backfill surrounding piping and the cut-off dike. Samples collected immediately adjacent to storm water piping are considered necessary to assess the storm water system as a potential preferential pathway for contaminant migration to the river.

NEXT STEPS

DEQ appreciates Siltronic's ongoing efforts to evaluate uplands and in-river contamination associated with releases from the facility, and recommends that as soon as practicable arrangements are made for Siltronic and DEQ to discuss the conceptual design, goals, and objectives of the enhanced bioremediation pilot study. The meeting will also provide an opportunity to discuss the scope of work for further evaluating the storm water conveyance system as a potential source of Area 2 sediment contamination.

Please don't hesitate to contact me if you have any questions regarding this letter, or if your understanding of the February 1st meeting discussions and agreements are not consistent with those summarized above.

Sincerely,

Dana Bayuk, R.G.
Project Manager
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